

MECHANISM FOR ESTIMATING AND CONTROLLING di/dt-INDUCED POWER SUPPLY VOLTAGE VARIATIONS

Abstract of the Disclosure

A system for delivering power to a device in a specified voltage range is disclosed. The system includes a power delivery network, characterized by a response function, to deliver power to the device. A current computation unit stores values representing a sequence of current amplitudes drawn by the device on successive clock cycles, and provides them to a current to voltage computation unit. The current to voltage computation unit filters the current amplitudes according to coefficients derived from the response function to provide an estimate of the voltage seen by the device. Operation of the device is adjusted if the estimated voltage falls outside the specified range.